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MEMORANDUM

DATE: June 30, 2015

TO: Eric Nuchims, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington 

SUBJ: **Organic Data Quality Assurance Review, John Day Vapor Response Site, John Day, Oregon**

REF: TDD: 15-05-0005 PAN: 1004530.0004.111.02

The data quality assurance review of 4 water and 3 soil samples collected from the John Day Vapor Response site in John Day, Oregon, has been completed. Gasoline range organics analysis (Ecology Method NWTPH-Gx) was performed by TestAmerica, Inc., Tacoma, Washington. All sample analyses were evaluated following EPA's Stage 2B and/or 4 Data Validation Electronic and/or Manual Process (S2B/4VE/M).

The samples were numbered:

15053135	15053136	15053137	15053138	15053513
15053514	15053515			

Data Qualifications:

1. Sample Holding Times: Acceptable.

The samples were maintained and received within the QC limits of $< 6^{\circ}\text{C}$. The samples were collected on June 4, 2015, and were analyzed by June 9, 2015, therefore meeting QC criteria of less than 14 days between collection and analysis for soil and preserved water samples (7 days for unpreserved water samples).

2. Initial Calibration: Acceptable.

Calculations were verified as correct. All relative percent differences (RPDs) were less than or equal to the laboratory control limits.

3. Continuing Calibration: Acceptable.

Calculations were verified as correct. All percent differences were less than or equal to the laboratory control limits.

4. Error Determination: Not Performed.

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. Blanks: Satisfactory.

A method blank was analyzed at the required frequency of every 12 hours for each matrix, preparation technique, and analysis system. Gasoline-range TPHs were detected in the soil method blank at 0.721 mg/kg. Associated positive results less than five times the blank results were qualified as not detected.

6. System Monitoring Compounds (SMC): Acceptable.

All recoveries of the SMCs were greater than 10% and within QC criteria.

7. Performance Evaluation Samples: Not Provided.

Performance evaluation samples were not provided to the laboratory.

8. Matrix and Blank Spikes: Acceptable.

Matrix and blank spike results were within laboratory QC limits.

9. Duplicates: Acceptable.

Laboratory spike duplicate results were within QC limits.

10. Quantitation and Quantitation Limits: Acceptable.

Sample quantitation and sample quantitation limits were correctly calculated.

11. Laboratory Contact: Not Required.

No laboratory contact was required.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

- JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.
- JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.
- JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.
- JQ - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
SDG No.: _____
Client Sample ID: 15053135 Lab Sample ID: 580-50550-1
Matrix: Water Lab File ID: F0815010.D
Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 09:37
Sample wt/vol: 5 (mL) Date Analyzed: 06/08/2015 16:06
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-VRX ID: 0.45 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 191512 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	2.4		0.050	0.027

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		50-150
98-08-8	Trifluorotoluene (Surr)	90		50-150

MW 63015

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
 SDG No.: _____
 Client Sample ID: 15053136 Lab Sample ID: 580-50550-2
 Matrix: Water Lab File ID: F0915010.D
 Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 11:54
 Sample wt/vol: 5(mL) Date Analyzed: 06/09/2015 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-VRX ID: 0.45(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 191644 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	0.027	J <u>Q</u>	0.050	0.027

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		50-150
98-08-8	Trifluorotoluene (Surr)	100		50-150

MW 6-30-15

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
 SDG No.: _____
 Client Sample ID: 15053137 Lab Sample ID: 580-50550-3
 Matrix: Water Lab File ID: F0815012.D
 Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 17:28
 Sample wt/vol: 5 (mL) Date Analyzed: 06/08/2015 17:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-VRX ID: 0.45 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 191512 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	ND		0.050	0.027

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		50-150
98-08-8	Trifluorotoluene (Surr)	100		50-150

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6-30-15

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
 SDG No.: _____
 Client Sample ID: 15053138 Lab Sample ID: 580-50550-4
 Matrix: Water Lab File ID: F0815013.D
 Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 12:00
 Sample wt/vol: 5 (mL) Date Analyzed: 06/08/2015 17:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-VRX ID: 0.45 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 191512 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	ND		0.050	0.027

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		50-150
98-08-8	Trifluorotoluene (Surr)	88		50-150

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6-30-15

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
SDG No.: _____
Client Sample ID: 15053513 Lab Sample ID: 580-50550-5
Matrix: Solid Lab File ID: F0815010.D
Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 14:12
Sample wt/vol: 5.530(g) Date Analyzed: 06/08/2015 16:32
Soil Aliquot Vol: 1.075 (mL) Dilution Factor: 1
Soil Extract Vol.: 5(mL) GC Column: RTX-VRX ID: 0.45 (mm)
% Moisture: 7.7 Level: (low/med) Medium
Analysis Batch No.: 191546 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	ND		4.3	0.53

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		50-150

MW f-30-15

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
SDG No.: _____
Client Sample ID: 15053514 Lab Sample ID: 580-50550-6
Matrix: Solid Lab File ID: F0815011.D
Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 15:40
Sample wt/vol: 5.688(g) Date Analyzed: 06/08/2015 17:03
Soil Aliquot Vol: 1.075 (mL) Dilution Factor: 1
Soil Extract Vol.: 5(mL) GC Column: RTX-VRX ID: 0.45(mm)
% Moisture: 22.8 Level: (low/med) Medium
Analysis Batch No.: 191546 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	ND		5.7	0.72

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		50-150

MW 6-30-15

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-50550-1
SDG No.: _____
Client Sample ID: 15053515 Lab Sample ID: 580-50550-7
Matrix: Solid Lab File ID: F0815012.D
Analysis Method: NWTPH-Gx Date Collected: 06/04/2015 16:00
Sample wt/vol: 6.259(g) Date Analyzed: 06/08/2015 17:34
Soil Aliquot Vol: 1.075 (mL) Dilution Factor: 1
Soil Extract Vol.: 5(mL) GC Column: RTX-VRX ID: 0.45 (mm)
% Moisture: 13.7 Level: (low/med) Medium
Analysis Batch No.: 191546 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00228	Gasoline	ND		4.3	0.54

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		50-150

MW 6/30/15